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#2

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RAW SEQUENCE LISTING DATE: 03/27/2002
PATENT APPLICATION: US/10/091,628 TIME: 14:03:49

Input Set : A:\LEX-0314-USA SEQLIST.txt
Output Set: N:\CRF3\03272002\J091628.raw

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      4 <110> APPLICANT: Wilganowski, Nathaniel L.
      5       Nepomnichy, Boris
      6       Burnett, Michael B.
      7       Hu, Yi
      9 <120> TITLE OF INVENTION: Novel Human Transporter Proteins and Polynucleotides
Encoding the
     10       Same
     12 <130> FILE REFERENCE: LEX-0314-USA
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/091,628
C--> 14 <141> CURRENT FILING DATE: 2002-03-06
     14 <150> PRIOR APPLICATION NUMBER: US 60/275,009
     15 <151> PRIOR FILING DATE: 2001-03-12
     17 <150> PRIOR APPLICATION NUMBER: US 60/284,152
     18 <151> PRIOR FILING DATE: 2001-04-17
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     26 <211> LENGTH: 1134
     27 <212> TYPE: DNA
     28 <213> ORGANISM: Homo sapiens
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     32 ccagtgggac tggaggtgca tggaaacctg gagctcgttt tcacagtggt gtccactgtg     120
     33 atgatggggc tgctcatgtt ctctttggga tgttccgtgg agatccggaa gctgtggtcg     180
     34 cacatcagga gaccctgggg cattgctgtg ggactgctct gccagtttgg gctcatgcct     240
     35 tttacagctt atctcctggc cattagcttt tctctgaagc cagtccaagc tattgctgtt     300
     36 ctcatcatgg gctgctgccc ggggggcacc atctctaaca ttttcacctt ctgggttgat     360
     37 ggagatatgg atctcagcat cagtatgaca acctgttcca ccgtggccgc cctgggaatg     420
     38 atgccactct gcatttatct ctacacctgg tcctggagtc ttcagcagaa tctcaccatt     480
     39 ccttatcaga acataggaat tacccttgtg tgcctgacca ttcctgtggc ctttggtgtc     540
     40 tatgtgaatt acagatggcc aaaacaatcc aaaatcattc tcaagattgg ggccgttgtt     600
     41 ggtggggtcc tccttctggt ggtcgcagtt gctggtgtgg tcctggcgaa aggatcttgg     660
     42 aattcagaca tcacccttct gaccatcagt ttcatctttc ctttgattgg ccatgtcacg     720
     43 ggttttctgc tggcactttt tacccaccag tcttggcaaa ggtgcaggac aatttcctta     780
     44 gaaactggag ctcagaatat tcagatgtgc atcaccatgc tccagttatc tttcactgct     840
     45 gagcacttgg tccagatgtt gagtttccca ctggcctatg gactcttcca gctgatagat     900
     46 ggatttctta ttgttgcagc atatcagacg tacaagagga gattgaagaa caaacatgga     960
     47 aaaaagaact caggttgcac agaagtctgc catacgagga aatcgacttc ttccagagag    1020
     48 accaatgcct tcttggaggt gaatgaagaa ggtgccatca ctcctgggcc accagggcca    1080
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     52 <211> LENGTH: 377
     53 <212> TYPE: PRT
     54 <213> ORGANISM: Homo sapiens
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Val Phe Thr Val Val Ser Thr Val Met Met Gly Leu Leu Met Phe Ser
        35                  40                  45
Leu Gly Cys Ser Val Glu Ile Arg Lys Leu Trp Ser His Ile Arg Arg
    50                  55                  60
Pro Trp Gly Ile Ala Val Gly Leu Leu Cys Gln Phe Gly Leu Met Pro
65                  70                  75                  80
Phe Thr Ala Tyr Leu Leu Ala Ile Ser Phe Ser Leu Lys Pro Val Gln
                85                  90                  95
Ala Ile Ala Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Ile Ser
            100                 105                 110
Asn Ile Phe Thr Phe Trp Val Asp Gly Asp Met Asp Leu Ser Ile Ser
        115                 120                 125
Met Thr Thr Cys Ser Thr Val Ala Ala Leu Gly Met Met Pro Leu Cys
    130                 135                 140
Ile Tyr Leu Tyr Thr Trp Ser Trp Ser Leu Gln Gln Asn Leu Thr Ile
145                 150                 155                 160
Pro Tyr Gln Asn Ile Gly Ile Thr Leu Val Cys Leu Thr Ile Pro Val
                165                 170                 175
Ala Phe Gly Val Tyr Val Asn Tyr Arg Trp Pro Lys Gln Ser Lys Ile
            180                 185                 190
Ile Leu Lys Ile Gly Ala Val Val Gly Gly Val Leu Leu Leu Val Val
        195                 200                 205
Ala Val Ala Gly Val Val Leu Ala Lys Gly Ser Trp Asn Ser Asp Ile
    210                 215                 220
Thr Leu Leu Thr Ile Ser Phe Ile Phe Pro Leu Ile Gly His Val Thr
225                 230                 235                 240
Gly Phe Leu Leu Ala Leu Phe Thr His Gln Ser Trp Gln Arg Cys Arg
                245                 250                 255
Thr Ile Ser Leu Glu Thr Gly Ala Gln Asn Ile Gln Met Cys Ile Thr
            260                 265                 270
Met Leu Gln Leu Ser Phe Thr Ala Glu His Leu Val Gln Met Leu Ser
        275                 280                 285
Phe Pro Leu Ala Tyr Gly Leu Phe Gln Leu Ile Asp Gly Phe Leu Ile
    290                 295                 300
Val Ala Ala Tyr Gln Thr Tyr Lys Arg Arg Leu Lys Asn Lys His Gly
305                 310                 315                 320
Lys Lys Asn Ser Gly Cys Thr Glu Val Cys His Thr Arg Lys Ser Thr
                325                 330                 335
Ser Ser Arg Glu Thr Asn Ala Phe Leu Glu Val Asn Glu Glu Gly Ala
            340                 345                 350
Ile Thr Pro Gly Pro Pro Gly Pro Met Asp Cys His Arg Ala Leu Glu
        355                 360                 365
Pro Val Gly His Ile Thr Ser Cys Glu
    370                 375
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Input Set : A:\LEX-0314-USA SEQLIST.txt
Output Set: N:\CRF3\03272002\J091628.raw

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<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
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atgtggcagg atagacctgc ccagccattg ttgccgatgt tcatttgtaa tgctgcctta 180
aggagatgag gagatgagag ccaattgttc cagcagctca gcctgccctg ccaacagttc 240
agaggaggag ctgccagtgg gactggaggt gcatggaaac ctggagctcg ttttcacagt 300
ggtgtccact gtgatgatgg ggctgctcat gttctctttg ggatgttccg tggagatccg 360
gaagctgtgg tcgcacatca ggagaccctg gggcattgct gtgggactgc tctgccagtt 420
tgggctcatg ccttttacag cttatctcct ggccattagc ttttctctga agccagtcca 480
agctattgct gttctcatca tgggctgctg cccggggggc accatctcta acattttcac 540
cttctgggtt gatggagata tggatctcag catcagtatg acaacctgtt ccaccgtggc 600
cgccctggga atgatgccac tctgcattta tctctacacc tggtcctgga gtcttcagca 660
gaatctcacc attccttatc agaacatagg aattaccctt gtgtgcctga ccattcctgt 720
ggcctttggt gtctatgtga attacagatg gccaaaacaa tccaaaatca ttctcaagat 780
tggggccgtt gttggtgggg tcctccttct ggtggtcgca gttgctggtg tggtcctggc 840
gaaaggatct tggaattcag acatcaccct tctgaccatc agtttcatct ttcctttgat 900
tggccatgtc acgggttttc tgctggcact ttttacccac cagtcttggc aaaggtgcag 960
gacaatttcc ttagaaactg gagctcagaa tattcagatg tgcatcacca tgctccagtt 1020
atctttcact gctgagcact tggtccagat gttgagtttc ccactggcct atggactctt 1080
ccagctgata gatggatttc ttattgttgc agcatatcag acgtacaaga ggagattgaa 1140
gaacaaacat ggaaaaaaga actcaggttg cacagaagtc tgccatacga ggaaatcgac 1200
ttcttccaga gagaccaatg ccttcttgga ggtgaatgaa gaaggtgcca tcactcctgg 1260
gccaccaggg ccaatggatt gccacagggc tctcgagcca gttggccaca tcacttcatg 1320
tgaatagcag ggactagctg gctggactgg ccccccttctt tttcagtggc cagtaaagac 1380
agtgtgcagc tgacacatga atcttgttgg tagggccagt gtgaatattt aagtgttcaa 1440
tgttagaata tttatatttt catgtggatt gtgaattgtg atgggatcac ttttggagat 1500
tcccatttca gggagtttct tctgggggtt aacataacgt atcaatgagc tgccttgtat 1560
gttcttgtct tcccatgcag caaatagtac cctggcccta 1600
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gaagaaacca tccttgtaag ttcaagctac gaaaataaac ggcctaattc cagccacctc 180
tttgtgaaaa tagaagatcc taaaatacta caaatggtga atgtggccaa gaagatctca 240
tcagatgcta caaactttac cataaatctg gtgactgatg aagaaggaga aacaaatgtg 300
actattcaac tctgggattc tgaaggtagg caagaaagac tcattgaaga aatcaagaat 360
gtgaaagtca aagtgctcaa acaaaaagac agtctactcc aggcaccaat gcatattgat 420
agaaayatcc taatgcttat tttaccacta atactattga ataagtgtgc atttggttgt 480
aagattgaat tacagctgtt tcaaacagta tggaagagac ctttgccagt aattcttggg 540
gcagttacac agtttttttct gatgccattt tgcgggtttc ttttgtctca gattgtggca 600
ttgcctgagg cgcaagcttt tggagttgta atgacctgca cgtgcccagg agggggtggg 660
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Input Set : A:\LEX-0314-USA SEQLIST.txt
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atacttgtgc cagtatcaat tggaatagtc atcaagcata gaatacctga aaaagcaagc 900
ttcttagaga gaataattag acctctgagt tttattttaa tgttcgtagg aatttatttg 960
actttcacag tgggattagt gttcttaaaa acagataatc tagaggtgat tctgttgggt 1020
ctcttagttc ctgctttggg tttgctgttt gggtactcct ttgctaaagt ttgtacgctg 1080
cctcttcctg tttgtaaaac tgttgctatt gaaagtggga tgttaaatag tttcttagct 1140
cttgccgtta ttcagctgtc ttttccacag tccaaggcca atttagcttc tgtggctcct 1200
tttacagtag ccatgtgttc tggatgtgaa atgttactga tcattctagt ttacaaggct 1260
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<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
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20 25 30
Glu Ile Leu Phe Phe Thr Lys Thr Glu Glu Thr Ile Leu Val Ser Ser
35 40 45
Ser Tyr Glu Asn Lys Arg Pro Asn Ser Ser His Leu Phe Val Lys Ile
50 55 60
Glu Asp Pro Lys Ile Leu Gln Met Val Asn Val Ala Lys Lys Ile Ser
65 70 75 80
Ser Asp Ala Thr Asn Phe Thr Ile Asn Leu Val Thr Asp Glu Glu Gly
85 90 95
Glu Thr Asn Val Thr Ile Gln Leu Trp Asp Ser Glu Gly Arg Gln Glu
100 105 110
Arg Leu Ile Glu Glu Ile Lys Asn Val Lys Val Lys Val Leu Lys Gln
115 120 125
Lys Asp Ser Leu Leu Gln Ala Pro Met His Ile Asp Arg Asn Ile Leu
130 135 140
Met Leu Ile Leu Pro Leu Ile Leu Leu Asn Lys Cys Ala Phe Gly Cys
145 150 155 160
Lys Ile Glu Leu Gln Leu Phe Gln Thr Val Trp Lys Arg Pro Leu Pro
165 170 175
Val Ile Leu Gly Ala Val Thr Gln Phe Phe Leu Met Pro Phe Cys Gly
180 185 190
Phe Leu Leu Ser Gln Ile Val Ala Leu Pro Glu Ala Gln Ala Phe Gly
195 200 205
Val Val Met Thr Cys Thr Cys Pro Gly Gly Gly Gly Gly Tyr Leu Phe
210 215 220
Ala Leu Leu Leu Asp Gly Asp Phe Thr Leu Ala Ile Leu Met Thr Cys
225 230 235 240
Thr Ser Thr Leu Leu Ala Leu Ile Met Met Pro Val Asn Ser Tyr Ile
245 250 255
Tyr Ser Arg Ile Leu Gly Leu Ser Gly Thr Phe His Ile Pro Val Ser
260 265 270

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Input Set : A:\LEX-0314-USA SEQLIST.txt
Output Set: N:\CRF3\03272002\J091628.raw

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Lys Ile Val Ser Thr Leu Leu Phe Ile Leu Val Pro Val Ser Ile Gly
        275                 280                 285
Ile Val Ile Lys His Arg Ile Pro Glu Lys Ala Ser Phe Leu Glu Arg
    290                 295                 300
Ile Ile Arg Pro Leu Ser Phe Ile Leu Met Phe Val Gly Ile Tyr Leu
305                 310                 315                 320
Thr Phe Thr Val Gly Leu Val Phe Leu Lys Thr Asp Asn Leu Glu Val
                325                 330                 335
Ile Leu Leu Gly Leu Leu Val Pro Ala Leu Gly Leu Leu Phe Gly Tyr
            340                 345                 350
Ser Phe Ala Lys Val Cys Thr Leu Pro Leu Pro Val Cys Lys Thr Val
        355                 360                 365
Ala Ile Glu Ser Gly Met Leu Asn Ser Phe Leu Ala Leu Ala Val Ile
    370                 375                 380
Gln Leu Ser Phe Pro Gln Ser Lys Ala Asn Leu Ala Ser Val Ala Pro
385                 390                 395                 400
Phe Thr Val Ala Met Cys Ser Gly Cys Glu Met Leu Leu Ile Ile Leu
                405                 410                 415
Val Tyr Lys Ala Lys Lys Arg Cys Ile Phe Phe Leu Gln Asp Lys Arg
            420                 425                 430
Lys Arg Asn Phe Leu Ile
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<210> SEQ ID NO: 6
<211> LENGTH: 1777
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 6
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tgcttagatg gctatatatt tgtttaaaag tacagcagtc cctcctactg gactttgatc     180
ctacaaaaac aactgttatc taactcaccc tcagactgtc actggaacac ctgcatgaag     240
aatgttcttt catttttaa aaacgatttt gcatatatga tttatttcag ctttcaaaat     300
gattagaaaa ctttttattg ttctactttt gttgcttgtg actatagaag aagcaaggat     360
gtcatcgctc agttttctga atatagagaa gactgaaata ctatttttca caaagactga     420
agaaaccatc cttgtaagtt caagctacga aaataaacgg cctaattcca gccacctctt     480
tgtgaaaata gaagatccta aaatactaca aatggtgaat gtggccaaga agatctcatc     540
agatgctaca aactttacca taaatctggt gactgatgaa gaaggagaaa caaatgtgac     600
tattcaactc tgggattctg aaggtaggca agaaagactc attgaagaaa tcaagaatgt     660
gaaagtcaaa gtgctcaaac aaaaagacag tctactccag gcaccaatgc atattgatag     720
aaayatccta atgcttattt taccactaat actattgaat aagtgtgcat ttggttgtaa     780
gattgaatta cagctgtttc aaacagtatg gaagagacct ttgccagtaa ttcttggggc     840
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ctatctcttt gctctgcttc tagatggaga tttcacattg gccattttga tgacttgcac    1020
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VERIFICATION SUMMARY DATE: 03/27/2002
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Input Set : A:\LEX-0314-USA SEQLIST.txt
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L:14 M:270 C: Current Application Number differs, Replaced Current Application No
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date